

CLAIMS

1. A seat recliner mechanism for a seat having a seat cushion and a reclinable squab, the mechanism including a stationary hinge member connectable with the seat cushion, an adjustable hinge member connectable with the squab and an angular position adjuster in the form of a wobble gear mechanism including an inner gear connected to one of the hinge members, an outer gear connected to the other hinge member and an eccentric rotatable drive element for causing eccentric rotation of the inner gear within the outer gear, wherein the outer gear has one more tooth than the inner gear and the inner and outer gears have conformal tooth profiles, whereby all but one of the teeth on the inner gear engage with teeth on the outer gear.
2. A seat recliner mechanism according to claim 1, in which the maximum peak-to-peak gap between the teeth of the inner and outer gears is less than 0.15mm, preferably less than 0.1mm.
3. A seat recliner mechanism according to claim 1 or claim 2, in which the inner and outer gears have a tooth form similar to a Wildhaber-Novikov tooth form.
4. A seat recliner mechanism according to any one of the preceding claims, in which the rotatable drive element includes an eccentric cam.
5. A seat recliner mechanism according to claim 4, in which the cam surface of the eccentric cam is partly cut away.
6. A seat recliner mechanism according to any one of the preceding claims, in which the rotatable drive element is mounted in a frusto-conical bearing.
7. A seat recliner mechanism according to claim 6, in which the frusto-conical bearing has bearing surfaces inclined at an angle of 7-10°, preferably approximately 9°, relative to the rotational axis of the bearing.
8. A seat recliner mechanism according to any one of the preceding claims, in which a compressible element is compressed between the rotatable drive element and one of the hinge members.

9. A seat recliner mechanism according to claim 8, in which the compressible element includes a plastics ring or a wave spring.
10. A seat recliner mechanism according to any one of the preceding claims, including a secondary gear mechanism that includes a secondary inner gear connected to one of the hinge members and a secondary outer gear connected to the other hinge member, said secondary inner and outer gears being arranged to come into engagement only when the recliner mechanism is deformed.
11. A seat recliner mechanism according to any one of the preceding claims, wherein the gears are semi-sheared out of the hinge members.
12. A seat recliner mechanism according to any one of the preceding claims, wherein said hinge members include welding tabs for welding direct to frame members of the seat cushion and squab.